

South Dakota State University

Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange

Electronic Theses and Dissertations

2020

Impact of Coaching by Extension Professionals on Rural Wellness Coalition Success

Taylor Willhite

South Dakota State University

Follow this and additional works at: <https://openprairie.sdstate.edu/etd>



Part of the [Nutrition Commons](#), [Sports Sciences Commons](#), and the [Sports Studies Commons](#)

Recommended Citation

Willhite, Taylor, "Impact of Coaching by Extension Professionals on Rural Wellness Coalition Success" (2020). *Electronic Theses and Dissertations*. 3759.
<https://openprairie.sdstate.edu/etd/3759>

This Thesis - Open Access is brought to you for free and open access by Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. It has been accepted for inclusion in Electronic Theses and Dissertations by an authorized administrator of Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. For more information, please contact michael.biondo@sdstate.edu.

IMPACT OF COACHING BY EXTENSION PROFESSIONALS ON RURAL
WELLNESS COALITION SUCCESS

BY
TAYLOR WILLHITE

A thesis submitted in partial fulfillment of the requirements for the

Master of Science

Major in Nutrition and Exercise Sciences

Specialization in Nutritional Sciences

South Dakota State University

2020

THESIS ACCEPTANCE PAGE

Taylor Willhite

This thesis is approved as a creditable and independent investigation by a candidate for the master's degree and is acceptable for meeting the thesis requirements for this degree.

Acceptance of this does not imply that the conclusions reached by the candidate are necessarily the conclusions of the major department.

Kendra Kattelmann

Advisor

Date

Kendra Kattelmann

Department Head

Date

Dean, Graduate School

Date

ACKNOWLEDGEMENTS

To my advisor, Dr. Suzanne Stluka:

I acknowledge you for guiding me as your advisee throughout my graduate school career. Your passion for what you do is inspiring. I will always be grateful for the time you spent helping me with my paper and for getting me to this point. I appreciate your guidance very much.

To my committee members and supporting mentors, Dr. Kendra Kattelman and Dr. Lacey McCormack:

I acknowledge the support you provided me throughout this process. Dr. Kattelman, thank you for stepping into the advisor role and keeping me on track. Dr. McCormack, thank you for your assistance with STATA, analyzing the quantitative portion of my thesis, and your countless time spent editing and providing me with feedback. I appreciate the time both of you spent in helping make my work better, thank you!

To the Extension staff member who assisted in my work, Hope Kleine:

I acknowledge you for taking time out of your day to assist in completing the analysis portion of my research and for your assistance with NVivo. The hours you spent analyzing and meeting with me were greatly appreciated. I could not have done this without you.

CONTENTS

ABBREVIATIONS.....	v
LIST OF FIGURES AND TABLES.....	vi
ABSTRACT.....	vii
CHAPTER 1. INTRODUCTION.....	1
CHAPTER 2. LITERATURE REVIEW.....	4
CHAPTER 3. MANUSCRIPT.....	23
INTRODUCTION.....	25
METHODS.....	26
RESULTS.....	29
DISCUSSION.....	32
REFERENCES.....	41
TABLES.....	43

ABBREVIATIONS

CDC	Centers for Disease Control
HEAL MAPPS™	Healthy Eating Active Living: Mapping Attributes using Participatory Photographic Surveys
IRB	Institutional Review Board
NEMS	Nutrition Environment Measures Survey
NHANES	National Health and Nutrition Examination Survey
PEARS	Program Evaluation and Reporting System
PSE	Policy, Systems, and Environment
RALA	Rural Active Living Assessment
RALPESS	Rural Activity Living Perceived Environment Support Scale
SNAP-Ed	Supplemental Nutrition Assistance Program Education
SD	South Dakota
SDSU	South Dakota State University
US	United States

LIST OF FIGURES AND TABLES

Figure 1. Coalition Functioning Framework.....	14
Table 1. T-Test results from subsection pre and post confidence scores of coaching scorecards.....	43
Table 2. Table 2. Key facilitators presented by Extension Wellness Coalition Coaches through key informant interviews.....	44
Table 3. Table 3. Key barriers presented by Extension Wellness Coalition Coaches through key informant interviews.....	47

ABSTRACT

IMPACT OF COACHING BY EXTENSION PROFESSIONALS ON RURAL
WELLNESS COALITION SUCCESS

TAYLOR WILLHITE

2020

Objective: To quantitatively assess coaches perceived confidence in coaching rural wellness coalitions and to qualitatively determine barriers and facilitators to success in coaching rural wellness coalitions.

Design: A mixed methods design was utilized with quantitative (scorecard) and qualitative (key informant interviews) methodologies.

Setting: Six rural South Dakota wellness coalitions.

Participants: Extension wellness coalition coaches (n=7), one previous and six current.

Intervention: A component of the broader SDSU Extension 1416 Centers for Disease Control (CDC) and Supplemental Nutrition Assistance Program Education (SNAP-Ed) intervention.

Analysis: STATA was utilized for the quantitative scorecard data by running paired t-tests. NVivo was utilized in the analysis of the qualitative key informant interview data by coding transcript to themes and then using a query matrix.

Results: Perceived confidence scores of coaches were found to be significantly different at post-intervention compared to pre-intervention (13.6 (8.6) vs 19.7 (9.3), $P=0.02$). Key facilitators for the Extension Coaches included: perception of coach role, Extension resources, community members, wellness coalition policy, systems, and environmental

changes, and community champion community involvement and availability. One key barrier was lack of training when starting.

Conclusions and Implications: Extension coaches can expect confidence in their coaching abilities to increase over time. This includes being better equipped to handle barriers and an understanding of facilitators to aid in coalition success. Future research should examine additional training for Extension coaches, particularly prior to facilitating wellness coalitions.

Keywords: wellness coalition, rural, Extension, community, community coaching, barriers, facilitators

CHAPTER 1
INTRODUCTION
IMPACT OF COACHING BY EXTENSION PROFESSIONALS ON RURAL
WELLNESS COALITION SUCCESS

Wellness coalitions have the ability to improve the health and wellbeing of rural communities, whom often face higher vulnerability to health disparities.¹ Many South Dakota (SD) counties have an obesity prevalence of over 40% compared to the state average of 31%.^{2,3} These counties may have lower access to healthful foods and opportunities to be physically active. The rural food environment in these communities leaves limited options for grocery stores and access to fresh produce.² Wellness coalitions have the ability to make lasting healthful changes to improve the well-being of these communities. The use of community coaches has aided in the successful sustained changes in numerous communities.⁴ Successful community coaches lead others to learn from personal experiences and one another to find solutions.⁴ Coaches aid in creating a ripple effect of change to drive the community towards an improved future, which is a component of aiding in sustained changes.⁴

Extension coaches serve a vital role in guiding the rural wellness coalition, and local community members. In SD, the coaches for each rural wellness coalitions were employees of South Dakota State University (SDSU) Extension. These wellness coalitions were formed in 2015 in SD counties with adult obesity rates greater than 40% to aid in the reduction and prevention of obesity in adults and their families. The wellness coalitions have played a critical role in making positive changes to the communities they are placed in.

This study will determine if self-assessed confidence of Extension wellness coalition coaches increases over the course of their coaching experience, and, barriers and/or facilitators they may face when working with rural wellness coalitions. To our knowledge there are limited tools available for assessing the confidence of community wellness coalition coaches. This information is critical to aid in the sustainability and success of the wellness coalitions.

Problem Statement

There is limited research literature regarding characteristics of Extension coaches that yield the most success in wellness coalition efforts. Rural wellness coalitions have a limited history in SD, and the nation, and there is a lack of assessment tools to measure the confidence of and skills needed by each coach to aid in overall wellness coalition success.

Objectives & Research Questions

Objective 1: To measure self-assessed confidence from beginning to present day of an Extension coach.

Question 1a: Does the Extension coach's self-assessed confidence score increase over the course of their coaching experience?

Objective 2: Understand the barriers and facilitators associated with coaching rural wellness coalitions by completing key informant interviews with the coaches.

Question 2a: What barriers and challenges do Extension coaches face in working with rural wellness coalitions?

Question 2b: What skills or past experiences facilitated in the coaching role for the rural wellness coalitions?

Question 2c: Which tasks or tools presented themselves as facilitators in coaching the rural wellness coalition(s)?

Objective 3: To determine resources still needed to aid in the success of coaching rural wellness coalitions by surveying and interviewing the Extension coaches.

Question 3a: What types of resources are needed for Extension coaches to be successful when working with rural wellness coalitions?

CHAPTER 2

LITERATURE REVIEW

Rural Health Disparities

Compared to urban communities, individuals living in rural communities face a higher rate of vulnerability to a variety of health disparities, including poor nutritional health and associated diseases.¹ Many studies have found that residents of rural neighborhoods are some of those most affected by lower access to supermarkets.⁵ Food insecurity in rural areas can lead to negative health outcomes in the individuals living there, including harm to physical and emotional health.⁵ According to Bauer et al., 21.3% of United States households nationwide with children experienced food insecurity.⁶ Fruit and vegetable consumption have been shown to result in more positive health outcomes and the food environment influences this.⁶ In rural settings, the cost of fresh fruits and vegetables is often more costly and the quality tends to be of lower quality in the smaller food stores found in rural communities.⁶ Lutifiyya et al. found that consuming less than five servings of fruits and vegetables a day is more common in U.S. rural adults, meaning there is overall a less balanced diet being consumed, which can lead to poor health outcomes.⁷

A lack of grocery stores in rural areas results in lower access to healthier foods. It has been shown that rural residents are affected more by the lack of access to healthful food products found in grocery stores and supermarkets.⁵ In a study by Powell et al., it was found that rural communities have 14% fewer chain supermarkets in comparison to urban communities.⁸ In many rural communities, convenience stores are where many

residents get their food. This food is commonly of lower quality and higher priced than what is found in supermarkets.¹

Rural areas experience health disparities, which can result from lower access to grocery stores and healthful foods. According to Eberhardt et al., there is a greater incidence of premature mortality in rural residents in comparison to urban residents.⁹ Cancer and cardiovascular disease death rates have also been shown to be greater in rural areas.⁹ Additionally, rural communities face higher rates of overweight and obesity. The 2005 to 2008 National Health and Nutrition Examination Survey (NHANES) indicated that the obesity prevalence among rural adults was 39.6%, which was slightly higher than that of urban adults at 33.4%.¹⁰

Healthcare access in rural areas is affected by many variables and often times, individuals living in rural areas tend to have lower access to healthcare. In rural areas there can be greater travel distance to get to a healthcare facility.¹¹ A study on geographic access to health care for rural Medicare beneficiaries found that utilization of healthcare is negatively impacted by long travel time.¹¹ This results in residents of rural areas seeking fewer visits to medical professionals when compared to urban residents.¹¹

Among rural communities, there are also rural tribal communities that face unique challenges. American Indians face health disparities for a variety of reasons, including having lower access to health care, lower access to fruits and vegetables, and higher levels of poverty.¹² In a study on American Indians living on the SD Pine Ridge Reservation, it was found that 40% of the families reported food insecurity.¹² There is concern to increase the access of fruits and vegetables on American Indian Reservations. Often times, American Indians rely on purchasing food from convenience stores or small

grocery stores that do not contain high-quality produce.¹² An additional study on the American Indian population in SD found that in reservation areas the study respondents' access to primary care was significantly reduced.¹³ According to Indian Health Service, American Indians have a higher incidence of diabetes mellitus, heart disease, and unintentional injuries than all other US races. The life expectancy of American Indians is also 5.5 years less than all other US races.¹⁴

Physical activity is an important component in the prevention of obesity and chronic diseases. Often times, residents of rural communities are more physically inactive when compared to urban residents.¹⁵ In a study looking at the impact of the food environment, physical activity and weight status in rural communities, it was found that neighborhood environment in rural areas contributes to obesity.¹¹ Rural roads are not always viewed as being safe to walk on and some rural adults perceive the area as not being desirable for physical activity, which can further contribute to obesity.¹¹ Walkable neighborhoods have been associated with lower risk for obesity as physical activity increases.¹¹ Geographical barriers to physical activity in rural communities' results from many factors, including limited opportunities for activity and poor quality or limited access to facilities for physical activity.¹⁶ Since rural communities often have higher rates of poverty than urban areas, this impacts the opportunities for being able to improve facilities.¹⁶

Wellness Coalitions

In SD, six counties had an adult obesity prevalence of over 40% in 2015.² In rural SD, high obesity prevalence is associated with a lack of accessible healthful foods and limited physical activity opportunities.² To aid in the improvement of health in rural

communities in SD, SDSU Extension staff created wellness coalitions in rural communities in 2015 under the project “Good & Healthy South Dakota Communities.” The project goal was to utilize rural community-based wellness coalitions to reduce and prevent obesity among the youth and their families in one community in each of the SD counties with an adult rate of obesity greater than 40%. The wellness coalitions aimed to help rural communities improve their healthy eating and physical activity.¹ Additionally, aiding the communities to focus on providing an environment that supports these healthful changes.¹

Coalitions generally include a variety of professionals from different areas of work, such as local government officials, business leaders, interested citizens, and health professionals.¹⁷ In a study that examined coalition effectiveness, it was found that coalitions that have “formal governance procedures, encourage strong leadership, foster active participation of members, cultivate diverse memberships, promote collaborations among member agencies, and facilitate group cohesion may be more effective.”¹⁷ Coalitions can work to reduce health disparities by utilizing representative of targeting specific populations in the planning of interventions within communities.¹⁸ The use of coalitions can aid in the likelihood of community engagement strategies being adopted in a community to achieve beneficial results.¹⁸ Anderson et al. concluded that coalition-led interventions can lead to beneficial changes in racial and ethnic minorities through the connection of health and human services.¹⁸

Another study that measured coalition functioning found that successful coalitions are the ones that sustain their organization and efforts for several years.¹⁹ It is important to plan for sustainability both financially and in the planning of programs and policies.¹⁹

Wellness coalition coaches were responsible for securing adequate funding and moving the coalition along to achieve the wellness coalition's goals. Leadership is a critical component to developing a coalition that is able to achieve coalition goals.¹⁹

Communities perceived improvement is also important in the improved health outcomes which aid in the promotion of the coalition's sustainability.¹⁹

Rural Tennessee utilized Community Coalitions for Change to address the obesity epidemic in their communities. They utilized the policy, systems, and environment (PSE) approach, which addresses various levels of behavior change.²⁰ Interventions have been found to be the most successful when diverse groups work together at the community level.²⁰ The purpose was to engage the communities in lowering obesity prevalence long term utilizing the PSE approach. From direct education, the majority of those that completed surveys reported improvements of being more physically active, eating healthier, and eating more fruits and vegetables.²⁰ Overall, the interventions were found to improve these communities, providing an example of the power that utilizing Community Coalitions in rural communities can have.²⁰

Community Needs Assessment

Each wellness coalition completed a baseline needs assessment to highlight issues in the community and to show where help is needed. Healthy Eating Active Living: Mapping Attributes using Participatory Photographic Surveys (HEAL MAPPS™) were conducted in 2015, and the data were analyzed in a HEAL MAPPS™ Community Report.²¹ HEAL MAPPS involves community residents in photomapping and communicating experiences that they perceive to be preventive in obesity or promoting potential solutions.²² The community report covered multiple areas, including: relevance

for the community, current public health efforts, methods and preliminary results, community readiness, summary section that included supporters and barriers identified during the community conversation regarding physical activity and nutrition, and resident-informed recommendations for community change.²

Additionally, the Rural Active Living Assessment (RALA) and Rural Activity Living Perceived Environment Support Scale (RALPESS) assessments were conducted. The RALA provided data regarding the physical environment, characteristics of the town, policies that impact physical activity, and community programs.²³ The RALPESS was utilized to understand how the community residents perceived the physical environment and was completed by the individuals that attended the community conversation.²⁴ Another assessment that was conducted included the National Environment Measures Survey (NEMS), which assessed the nutrition environment of convenience and grocery stores in the rural communities.²⁵ A section on traditional American Indian food(s) was developed by SDSU Extension and included in this survey to look at the availability within tribal communities.

Coalition Implementation

The wellness coalition coaches recruited community members brought local community entities was critical to aid in the success of changes in the community and acquiring a diverse group of members from other organizations. Incorporating youth was also encouraged to aid in sustainability for the future. The use of a Community Champion, who were identified as respected role models in the given community, were paid a small stipend and utilized to help lead the wellness coalition and were critical to the implementation of activities and achievements.

Creating a formal advisory board and subcommittees provided great benefit to the wellness coalitions. Leadership of these boards and subcommittees was both formal and informal, depending on that given wellness coalition and their situation. Advisory board use varied with each location. The purpose of the advisory board was to aid in guiding the wellness coalition members and to help move activities along. Mission statements were also incorporated as a tool for the wellness coalitions to refer to. These aided in providing a vision for the wellness coalition to strive for. Strategic planning aided in facilitation of meetings and positioning the communities for change. Coaches needed to assess the external environment and listen to feedback from stakeholders.

Vision is what keeps an organization focused, and is at the top of a strategic plan.²⁶ Identifying values aids in recognizing the organizations culture and the core principles for the group members, while priorities provide clarification on how to achieve the vision.²⁶ Lastly, strategic objective, goals, and actions points the organization in the right direction to achieve outcomes and ensures accountability.²⁶

Action Planning

Evidence-based interventions completed by the wellness coalitions in their communities were presented in the form of a “menu” which focused on two strategies. Strategy One included increasing consumption of healthy food and beverages as recommended by the 2020 Dietary Guidelines for Americans.² Strategy Two was to increase physical activity opportunities.² Each wellness coalition was charged with selecting at least one menu item from each strategy to implement and sustain in their rural community. The community needs assessments were utilized to select the interventions that would be most applicable based on the data for that given community.

Menu items utilized policy, system, and environmental (PSE) strategies that aimed to make improvements within the communities.²

In addition, each wellness coalition was asked to start a Food and Demonstration Garden that utilizes both education and PSE strategies.² The goal of these garden were to increase access and utilization of produce to members of the rural communities. There were also paid seasonal garden coordinators hired to aid in the gardening efforts (weeding, harvesting, teaching of education classes, etc.). The gardens required a great deal of effort, including planning, planting, maintenance, and harvest.² Additionally, teaching the community members gardening skills was also important.²

Implementation

The wellness coalitions aimed to meet at least once a month, but the frequency depended on a variety of factors, including weather, and the schedule was unique to each coalition. Extension wellness coalition coaches scheduled meetings and sent email reminders to members regarding projects and helped to maintain communication between meetings. Agendas played an important role in keeping the wellness coalition meetings on track.²⁷ They aided in assigning ownership to different tasks and preparing members better for each meeting.²⁷

An important aspect of implementation included the Community Action Plan (CAP) and budget justification form. The wellness coalition coaches were trained to use these tools to plan the chosen interventions.² These tools aided the coaches in planning for the interventions. Each strategy and individual item had a CAP template created which included the following sections: objectives, sector, planned action, and funding requested and/or secured.² The following sections were included in the budget

justification form: item request, level of priority, quantity needed, justification for purchasing the item, cost per item, and total cost.² Upon completion, both the CAP and budget justification form were required to be signed by a coalition representative. The forms were then routed and to SDSU Extension project leadership team for approval and/or modifications.²

Evaluation

Menu item implementation efforts were tracked by an overall evaluation plan for SDSU Extension. Additionally, feedback was given for adjustments needed in the work plan. The evaluation plan aided in the assurance that activities yielded the desired outcomes.² There was a focus on tracking activities that contributed to the short-term outcomes. As discussed previously, HEAL MAPPS, RALA, RALPESS, and NEMS assessments were utilized in assessing change in the environment after wellness coalition establishment and interventions. These assessments were completed as baseline (2015) and again at year four (2019). Wellness coalition meeting minutes, Coalition Effectiveness Inventory and the community champion survey were used to measure partnership engagement, program administration and communication.² Determining coalition development for each community was done by using this data. Perceptions of group decision-making processes, satisfaction with coalition participation, collaborative activities, and the impact in the community were assessed with these tools.²

The Program Evaluation and Reporting System (PEARS) was used in the tracking of direct education efforts. This is a web-based data-management system that was built to aid Extension administrators in the management of program data and to demonstrate

impact.² Progress was entered into PEARS by Extension staff members to track the involvement of efforts.

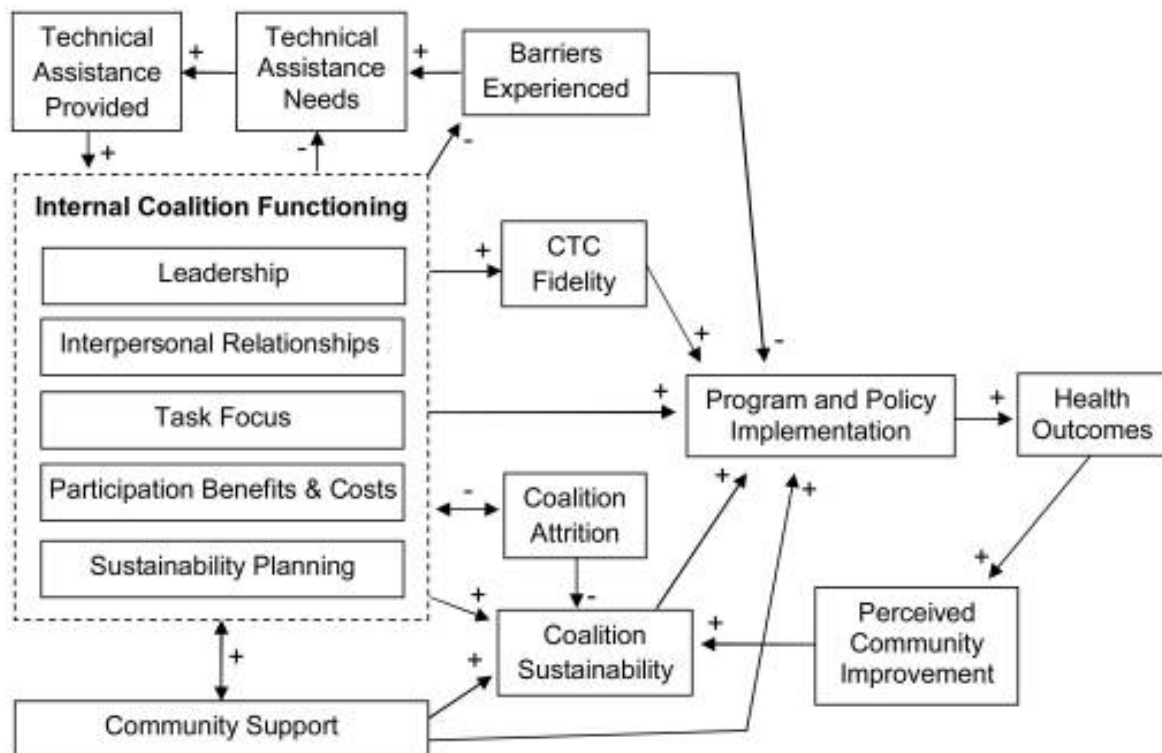
Community Coaching

There are numerous forms of coaching utilized in a variety of settings, with one of these forms being community coaching. While the study of community coaching is a more recent form of coaching, it is important to have an understanding to guide success in coaching within the community setting. According to Cohen et. al, community coaching is “an adaptive practice tailored to unique community contexts to guide systemic change via participant empowerment.”²⁸ Within community coaching, there is promotion of collaborative approaches and community coaches play an important role in the guiding and empowering of others to take action.²⁸ Engaging participants in the community is a primary objective for community coaching, which has evolved since the 1960’s.²⁸ There are “Do’s” and “Don’ts” that have been identified to aid in the success of community coaching. The “Do’s” include listening and adapting to the community, being observant of cultural cues and matching language, recognition of the coach’s limitation and asking for help. Additionally, creating small wins to aid in the planning and to limit frustration.²⁸ As for the “Don’ts,” a community coach should not expect verbatim that works for one community to work for another one; community’s needs should not be confused with the goals; and lastly, it is important to not underestimate wisdom from locals or to misunderstand their openness to changes.²⁸

Models have been created to provide an overview on coalition functioning and the one in the figure below is based on coalition functioning leading to health outcomes through the support of programs and policy implementation.¹⁹ This model

displays five domains of internal coalition functioning, including leadership, interpersonal relationships, task focus, participation benefits and costs, and sustainability planning.¹⁹ The external components of the model are shown outside of the internal coalition functioning box, which shows how the two components influences the coalitions program and policy implementation. Additionally, there are indirect influences such as barriers experienced by the coalition and coalition sustainability.¹⁹ This model provides a visual look at how the SD wellness coalitions worked within the communities to create positive changes. The Extension wellness coaches played a large role in the internal coalition functioning to ensure that the coalitions were successful within their given community.

Figure 1. Coalition Functioning Framework¹⁹



Coaching for Success

According to *Guiding Sustainable Community Change: An Intro to Coaching*,²⁹ there are six facets that a good community coach brings to the experience for discipline. The list includes Inner Building Blocks including Values, Spirit, Reflection, Vision, Goodwill, and Resolve.²⁹ By asking oneself different questions under each of the Blocks, the community coach is able to bring themselves to “the practice of community coaching.” An example of a questions under the “Values” Block includes “What are your continuing challenges as you carry on the work of coaching for change and leadership in the community?”²⁹ Coaches need to operate bias-free and be able to review their own values to do so. Being open to learning and being the one that is aiding in the transformation of the group is important.²⁹

While there are tools available to assess certain stakeholder characteristics in community interventions, Korn et al developed a novel survey to measure the social networks, knowledge, and engagement of stakeholders in childhood obesity prevention community diffusion.³⁰ The pilot-tested novel survey was able to conclude that social network, knowledge, and engagement data can be used in the implementing of leadership trainings for stakeholders, trainings, and in the development of community wide changes.³⁰ Success can be sustained when tailoring prevention intervention to the characteristics of communities and the stakeholders social network structures, knowledge, and engagement.

Theoretical application in community change

Change within a community requires community members to be willing to change and accept positive changes. There are theories to aid in understanding health behaviors

that are influenced by social and psychological determinants.³¹ The theory of planned behavior provides insight to how behavior impacts an individual's willingness to perform a behavior or make a change. An individual's views on the likelihood of consequences as a result of a behavior play a role in whether the individual chooses to act or not. Within this theory, the best indicator for behavior is thought to be intention. This is a representation of a person's readiness to behave based on their cognition. Three things determine intention, including the individual's attitude toward the given behavior, subjective norms and their perception of their control in the behavior. Subjective norms include how the individual measures their friends and family will care about the given behavior.³²

Utilizing the Theory or Planned Behavior can aid in understanding what makes an individual behave how they do. Attitudes and underlying beliefs can play a role in the decision-making processes regarding behavior. Underlying beliefs regarding a healthy behavior, such as the behaviors encouraged by the wellness coalitions, impact how much value an individual places on making these healthy behaviors.³³ When designing interventions, it is important to consider how beliefs and individual's specific expectations regarding a behavior will impact their willingness to change. Within the wellness coalitions, the wellness coaches needed to ensure that they were encouraging healthful behaviors while considering how underlying beliefs could influence the community members willingness to change.³³

The theory of planned behavior can be used to guide interventions, such as the ones by the wellness coalition to aid in changing lifestyle behaviors and community wellbeing.³¹ Having an understanding of the beliefs and attitudes that determine the

actions or behaviors can allow for them to be changed.³³ The wellness Coaches role in guiding the coalitions, and in turn the communities, needed to be aided by the understanding of community members beliefs and attitudes. This theory has been studied extensively and been used to understand dietary and physical activity behaviors. One intervention study utilized this theory when developing interventions with two stages.³³ In stage one, the educators used the theory to identify barriers or facilitators of behavior that impact the target audience that need addressing.³³ Obtaining this information required open-ended interviews and focus groups to gain valuable insight.³³ The second stage included designing message content based off of relevant beliefs. Focusing on outcome beliefs, social norms, and self-efficacy has led to successes in these interventions.³³

Wellness coalition coaches lead the coalitions in identifying areas to focus interventions on, which required numerous hours gaining insight into community members and needs of the community. By utilizing the theory of planned behavior, wellness coalition coaches can begin to understand what motivates the communities to change. Ultimately, the wellness coalition coaches act as leaders to guide their coalitions to make the sustained changes in their communities, but becoming a trusted member is important in this. Focusing on social norms and beliefs of community members was key in creating lasting changes in the communities.

REFERENCES

1. Sharkey JR. Measuring Potential Access to Food Stores and Food-Service Places in Rural Areas in the U.S. *Am J Prev Med.* 2009;36(4):S151-S155.
doi:10.1016/J.AMEPRE.2009.01.004
2. Stluka S. Wellness Coalitions - Healthy Food, Families, and Communities. SDSU Extension. <https://www.sdstate.edu/sdsuextension>. Accessed February 10, 2020.
3. South Dakota State Obesity Data, Rates and Trends – The State of Obesity. <https://stateofobesity.org/states/sd/>. Accessed December 9, 2018.
4. Emery M, Hubbell K, Miles-Polka B. *A Field Guide to Community Coaching A Field Guide to Community Coaching Developed by Mary Emery, PhD, Ken Hubbell and Becky Miles-Polka Published with Support from the W. K. Kellogg Foundation, the Annie E. Casey Foundation, Kellogg Action Lab at Fieldstone Alliance, and the Northwest Area Foundation.*
<http://www.communitycoaching.com>. Accessed August 2, 2019.
5. Larson NI, Story MT, Nelson MC. Neighborhood Environments: Disparities in Access to Healthy Foods in the U.S. *Am J Prev Med.* 2009;36(1):74-81.e10.
doi:10.1016/J.AMEPRE.2008.09.025
6. Bauer KW, Widome R, Himes JH, et al. High Food Insecurity and Its Correlates Among Families Living on a Rural American Indian Reservation. *Am J Public Health.* 2012;102(7):1346-1352. doi:10.2105/AJPH.2011.300522
7. Lutfiyya MN, Chang LF, Lipsky MS. A cross-sectional study of US rural adults' consumption of fruits and vegetables: do they consume at least five servings daily?

- BMC Public Health*. 2012;12:280. doi:10.1186/1471-2458-12-280
8. Powell LM, Slater S, Mirtcheva D, Bao Y, Chaloupka FJ. Food store availability and neighborhood characteristics in the United States. *Prev Med (Baltim)*. 2007;44(3):189-195. doi:10.1016/J.YPMED.2006.08.008
 9. Eberhardt MS, Pamuk ER. The Importance of Place of Residence: Examining Health in Rural and Nonrural Areas. *Am J Public Health*. 2004;94(10):1682-1686. doi:10.2105/AJPH.94.10.1682
 10. Befort CA, Nazir N, Perri MG. Prevalence of Obesity Among Adults From Rural and Urban Areas of the United States: Findings From NHANES (2005-2008). *J Rural Heal*. 2012;28(4):392-397. doi:10.1111/j.1748-0361.2012.00411.x
 11. Chan L, Hart LG, Goodman DC. Geographic Access to Health Care for Rural Medicare Beneficiaries. *J Rural Heal*. 2006;22(2):140-146. doi:10.1111/j.1748-0361.2006.00022.x
 12. Moon H, Roh S, Lee Y-S, Goins RT. Disparities in Health, Health Care Access, and Life Experience Between American Indian and White Adults in South Dakota. *J Racial Ethn Heal Disparities*. 2016;3(2):301-308. doi:10.1007/s40615-015-0146-3
 13. Davis MM, Spurlock M, Dulacki K, et al. Disparities in Alcohol, Drug Use, and Mental Health Condition Prevalence and Access to Care in Rural, Isolated, and Reservation Areas: Findings From the South Dakota Health Survey. *J Rural Heal*. 2016;32(3):287-302. doi:10.1111/jrh.12157
 14. Indian Health Services. Disparities | Fact Sheets.

<https://www.ihs.gov/newsroom/factsheets/disparities/>. Accessed December 9, 2018.

15. Umstattd Meyer MR, Perry CK, Sumrall JC, et al. Physical Activity-Related Policy and Environmental Strategies to Prevent Obesity in Rural Communities: A Systematic Review of the Literature, 2002-2013. *Prev Chronic Dis*. 2016;13:E03. doi:10.5888/pcd13.150406
16. Lo BK, Morgan EH, Foltz SC, et al. Environmental Influences on Physical Activity among Rural Adults in Montana, United States: Views from Built Environment Audits, Resident Focus Groups, and Key Informant Interviews. *Int J Environ Res Public Health*. 2017;14(10). doi:10.3390/ijerph14101173
17. Zakocs RC, Edwards EM. What Explains Community Coalition Effectiveness?: A Review of the Literature. *Am J Prev Med*. 2006;30(4):351-361. doi:10.1016/J.AMEPRE.2005.12.004
18. Anderson LM, Adeney KL, Shinn C, Safranek S, Buckner-Brown J, Krause LK. Community coalition-driven interventions to reduce health disparities among racial and ethnic minority populations. *Cochrane Database Syst Rev*. 2015;(6). doi:10.1002/14651858.CD009905.pub2
19. Brown LD, Feinberg ME, Greenberg MT. Measuring Coalition Functioning. *Heal Educ Behav*. 2012;39(4):486-497. doi:10.1177/1090198111419655
20. Wallace HS, Franck KL, Sweet CL. Community Coalitions for Change and the Policy, Systems, and Environment Model: A Community-Based Participatory Approach to Addressing Obesity in Rural Tennessee. *Prev Chronic Dis*.

- 2019;16:180678. doi:10.5888/pcd16.180678
21. John DH, Gunter K. Healthy Eating Active Living - Mapping Attributes using Participatory Photographic Surveys (HEAL MAPPS). *J Appl Gerontol*. 2016;35(10):1095-1120. doi:10.1177/0733464814566679
 22. John D, Winfield T, Etuk L, et al. Community-Engaged Attribute Mapping: Exploring Resources and Readiness to Change the Rural Context for Obesity Prevention. *Prog Community Heal Partnerships Res Educ Action*. 2017;11(2):183-196. doi:10.1353/cpr.2017.0023
 23. Yousefian A, Hennessy E, Umstattd MR, et al. Development of the rural active living assessment tools: Measuring rural environments. *Prev Med (Baltim)*. 2010;50:S86-S92. doi:10.1016/j.ypmed.2009.08.018
 24. Umstattd MR, Baller SL, Hennessy E, et al. Development of the Rural Active Living Perceived Environmental Support Scale (RALPESS). *J Phys Act Health*. 2012;9(5):724-730. <http://www.ncbi.nlm.nih.gov/pubmed/21946157>. Accessed August 7, 2019.
 25. Glanz K, Sallis JF, Saelens BE, Frank LD. Nutrition Environment Measures Survey in Stores (NEMS-S) Development and Evaluation. *Am J Prev Med*. 2007;32(4):282-289. doi:10.1016/j.amepre.2006.12.019
 26. Brandon University. *Strategic Action Plans & Alignment A Guide for Unit Heads Putting Priorities into Action*. <https://www.brandonu.ca/ld/files/Strategic-Action-Plans-and-Alignment-Guide.pdf>. Accessed August 6, 2019.
 27. Koshy K, Liu A, Whitehurst K, Gundogan B, Al Omran Y. How to hold an

effective meeting. *Int J surgery Oncol*. 2017;2(5):e22.

doi:10.1097/IJ9.0000000000000022

28. Cohen K, Higgins L, Sanyal N, Harris C. Community Development Community Coaching: Answering the Call for Innovative Approaches to Community-Based Development Initiatives. 2009. doi:10.1080/15575330809489659
29. Hubbell K, Emery M. *Guiding Sustainable Community Change An Introduction to Coaching*. www.communitycoaching.com. Accessed January 16, 2019.
30. Korn AR, Hennessy E, Hammond RA, et al. Development and testing of a novel survey to assess Stakeholder-driven Community Diffusion of childhood obesity prevention efforts. *BMC Public Health*. 2018;18(1):681. doi:10.1186/s12889-018-5588-1
31. Hardin-Fanning F, Ricks JM. Attitudes, social norms and perceived behavioral control factors influencing participation in a cooking skills program in rural Central Appalachia. *Glob Health Promot*. 2017;24(4):43-52.
doi:10.1177/1757975916636792
32. Health Communication | Theory of Planned Behavior/ Reasoned Action.
<https://www.utwente.nl/en/bms/communication-theories/sorted-by-cluster/Health-Communication/theory-planned-behavior/>. Accessed February 13, 2019.
33. Contento IR. *Nutrition Education: Linking Research, Theory, and Practice*. 2nd ed. Jones and Bartlett; 2011.

CHAPTER 3

MANUSCRIPT

Impact of Coaching by Extension Professionals on Rural Wellness Coalition Success

ABSTRACT

Objective: To quantitatively assess coaches perceived confidence in coaching rural wellness coalitions and to qualitatively determine barriers and facilitators to success in coaching rural wellness coalitions.

Design: A mixed methods design was utilized with quantitative (scorecard) and qualitative (key informant interviews) methodologies.

Setting: Six rural South Dakota wellness coalitions.

Participants: Extension wellness coalition coaches (n=7), one previous and six current.

Intervention: A component of the broader SDSU Extension 1416 Centers for Disease Control (CDC) and Supplemental Nutrition Assistance Program Education (SNAP-Ed) intervention.

Analysis: STATA was utilized for the quantitative scorecard data by running paired t-tests. NVivo was utilized in the analysis of the qualitative key informant interview data by coding transcript to themes and then using a query matrix.

Results: Perceived confidence scores of coaches were found to be significantly different at post-intervention compared to pre-intervention (13.6 (8.6) vs 19.7 (9.3), $P=0.02$). Key facilitators for the Extension Coaches included: perception of coach role, Extension resources, community members, wellness coalition policy, systems, and environmental changes, and community champion community involvement and availability. One key barrier was lack of training when starting.

Conclusions and Implications: Extension coaches can expect confidence in their coaching abilities to increase over time. This includes being better equipped to handle barriers and an understanding of facilitators to aid in coalition success. Future research should examine additional training for Extension coaches, particularly prior to facilitating wellness coalitions.

Keywords: wellness coalition, rural, Extension, community, community coaching, barriers, facilitators

INTRODUCTION

The use of wellness coalitions involves a community-centered approach that involves organizational representatives, community-members, and the use of partnerships.¹ Utilization of a coach to guide the community is thought to aid in the sustainability of success in community change. They offer communities a variety of assets, such as the ability to apply local knowledge, recognizing leaders of the community, and discovering ways to sustain economic change and leadership.² Communities can get stuck on why things may not work, preventing them from taking action. Coaches aid in moving the communities beyond negative thinking and focus on strength-based approaches to community work.² While coaches do not tell the communities what they need to do, they guide and support them in building up one another and in finding solutions.²

In 2015, there were six South Dakota (SD) counties with an adult obesity prevalence over 40%.³ In rural SD, high obesity prevalence is associated with a lack of accessible healthful foods and limited physical activity opportunities.⁴ To aid in the improvement of health in rural communities in SD, SDSU Extension staff created wellness coalitions in rural communities in 2015 under the project “Good & Healthy South Dakota Communities.” The project goal was to utilize rural community-based wellness coalitions to reduce and prevent obesity among the youth and their families in one community in each of the SD counties with an adult rate of obesity greater than 40%. Each wellness coalition had an Extension coach who took on a facilitative leadership role to guide them in making sustainable changes. The wellness coalitions aimed to assist rural communities in improving their healthy eating and physical activity. Additionally,

aiding the communities to focus on providing an environment that supports these healthful changes.³

Basic skill sets that are critical for coaches to possess have been identified, however, each coach brings their own ideas and interpretation on what being a coach entails.² Regardless of training each coach is unique in the how they address community possibilities and coaching.² There is a general lack of knowledge relating to barriers, facilitators, and coaching characteristics in successful community change brought about by wellness coalitions. Additionally, there is a lack in assessment tools to identify skills needed by coaches to lead to success and measurement of coach confidence. Therefore, the purpose of this study was to quantitatively assess coaches perceived confidence in coaching rural wellness coalitions and to qualitatively determine barriers and facilitators to success in coaching rural wellness coalitions.

METHODS

Data for the present study were collected as a part of a larger 1416 Centers for Disease Control (CDC) and SD Supplemental Nutrition Assistance Education-Program (SNAP-Ed) project. Additional information about the project can be found here. Link to project: <https://www.cdc.gov/nccdphp/dnpao/state-local-programs/hop-1809/high-obesity-program-1809.html>. The Coaching Confidence Scorecard was developed as a part of the *Voices for Food* project.⁵

A mixed methods design was used which included a quantitative coaching confidence assessment, demographic information, and a qualitative key informant interview. All current and past Extension coaches (n=7) were invited to participate. All coaches chose to participate and were provided written informed consent. Data were

collected between June and July 2019. Past coaches who were no longer employed by the University (n=1) were compensated with a \$30 gift card for their participation. The South Dakota State University Institutional Review Board (IRB) approved this study.

COACHING CONFIDENCE SCORECARD

In an anonymous electronic survey, Extension coaches were asked to assess their confidence retrospectively for three time periods (Pre-Wellness Coalition Coaching and Post-Wellness Coalition Coaching). Pre-wellness coalition coaching occurred at baseline prior to coaching the coalition(s) and before training. Post-wellness coalition coaching referred to the time-period of their entire coaching experience, which varied from two to four years. Likert scale format was followed for the questions where 1 was not confident at all and 5 was completely confident. Scores could range from 5 to 30 points in individual sections. Pre and post scores were totaled for the following sections: organizational structure, organization purpose, key implementation activities, and wellness coalition accomplishments, along with a total overall score. These sections encompassed areas that the Extension coaches were responsible for.

KEY INFORMANT INTERVIEWS

Semi-structured interviews were conducted by a researcher trained in qualitative interview methods. The same questions were asked to each interviewee. The interviews were between 40 and 90 minutes long. All interviews were conducted using the online platform, Zoom®, at the participant's convenience. Each interview was digitally recorded and transcribed through the Transcribeme service.⁷

The informant's confidence in their ability to coach the wellness coalition(s), along with the facilitators and barriers regarding the wellness coalition(s) were the focus

of the interviews. Questions relevant to the tools and experiences that had aided in their coaching role were asked. The interview questions were based on the same items as the Coaching Confidence scorecard, however consisted of asking the “why” and went more in-depth. Coaches had the opportunity to discuss any discrepancies or clarification needed on the survey. They had the opportunity to ask questions throughout the interview.

STATISTICAL ANALYSES

Statistical analyses were conducted using Stata Version 14.2.⁸ Paired t-tests were used to identify differences between pre and post confidence scorecard scores. A P-value < 0.5 was considered statistically significant.

Transcripts were uploaded to NVivo and coded independently by two research team members. Nodes were created by the researchers after reading through the transcripts of the interviews and identifying ‘themes’ or areas that the coaches discussed frequently, which were used to code each transcript into. Verbatim from the transcripts that the researchers felt was important to capture were coded into the pre-determined nodes. There was a total of 35 nodes which aligned with the scorecard and interview questions. To determine the level of agreement between the two coders, a coding comparison query was ran. A Kappa value > 0.40 was used to establish a fair-to-good rate of agreement status. Following the comparison query, any nodes with a Kappa of < 0.40 were went through and discussed amongst the two coders.

Facilitator and barrier nodes were created for a second round of coding. This took previously coded lines within the nodes from the first round and coded them to these two new nodes. A comparison query was run again to determine the agreement between the

two coders. Once again, Kappas < 0.40 were revisited and discussed between the coders. Lastly, a matrix query was ran to identify key barriers and facilitators. A cutoff of significance was 70.0% and higher.

RESULTS

A total of seven ($n=7$) Extension coaches agreed to participate and completed both the Coaching Confidence Scorecard and key informant interview. All Extension coaches identified as female. Four were between the ages of 25 – 34 years old, two were between the ages of 35 – 44 years old, and one was between the ages of 55 – 64 years old. Six of the coaches were white, and one was American Indian or Alaska Native. Six coaches also identified as Non-Hispanic or Latino. One coach chose not to identify their ethnicity. Degrees held by the Extension coaches included four Master's degrees and three Bachelor's degrees.

COACHING CONFIDENCE SCORECARD

The organizational structure sub-section score was significantly different at pre-intervention compared to post intervention (13.6 (8.6) vs 19.7 (9.3), $P=0.02$), with a score of 0 indicating no confidence and a score of 28 indicating complete confidence. At baseline, scores ranged from 0 to 27 At post intervention, scores ranged from 0 to 28. Individual elements within this section: lead or convene a wellness coalition, include paid staff or volunteers, create sub-committees or working groups, involve a diverse group of members from other organizations, involve community champions in the leadership of the wellness coalition, involve youth in the wellness coalition.

The organizational purpose sub-section score was also significantly different when comparing pre-intervention to post intervention (9.0 (5.7) vs 13.3 (6.2), $P=0.01$),

with a score of 0 indicating no confidence and a score of 19 indicating complete confidence. At baseline, scores ranged from 0 to 19. At post intervention, scores ranged from 0 to 19. Individual elements within this section: documented purpose and agenda approved by all coalition members, share agenda and purpose with all wellness coalition members that were not present at meetings, develop a written strategic plan, develop a written mission statement.

The key implementation activities sub-section score was significantly different at pre-intervention compared to post intervention (27 (17.0) vs 39.6 (6.2), $P=0.02$), with a score of 0 indicating no confidence and a score of 55 indicating complete confidence. At baseline, scores ranged from 0 to 53. At post intervention, scores ranged from 0 to 55. Individual elements within this section: complete a community needs assessment, include various community members in a community needs assessment, document the results of the community needs assessment, develop committee workgroup/committee action plans/work plans within your wellness coalition, hold at least six wellness coalition meetings in a year, hold at least three sub-committee meetings in a year, provide linkages with other Extension resources or staff members, forge various partnerships or receive assistance from community entities, set up a wellness coalition membership listserv or other source of communication, communicate with the community regarding accomplishments, seek non-profit 501c3 status, establish 501c3 status (or fiscal agent), and obtain funding to support the wellness coalition. These elements were tasks that the Extension coaches were responsible for doing to facilitate implementation.

The wellness coalition accomplishments sub-section score was significantly different when comparing pre-intervention to post intervention (5.6 (4.6) vs 9.1 (4.5),

$P=0.03$), with a score of 0 indicating no confidence and a score of 13 indicating complete confidence. Baseline scores ranged from 0 to 13. Post intervention scores ranged from 0 to 13. Individual elements within this section: began work on and/or implemented at least one policy change per year, began work on and/or implemented at least one system change per year, and began work on and/or implemented at least one environmental change per year.

The total score was significantly different at post intervention compared to pre-intervention (51.1 (35.3) vs 81.7 (37.7), $P=0.01$), with a score of 0 indicating no confidence and a score of 115 indicating complete confidence. At baseline, raw scores ranged from 0 to 112. At post intervention, raw scores ranged from 0 to 115.

KEY INFORMANT INTERVIEWS

There were 12 facilitators identified as listed in Table 2. The following were discussed in a positive manner by the Extension coaches: Extension Resources, Perception of Coach Role, Participation, PSE (Policy, Systems, and Environment), Outside Funding, Community Members, Partnerships/Partners, Mission Statement and Vision, Community Champion Community Involvement, Community Champion Availability, use of an Agenda, Communication between the coach and coalition members, and the use of an Action Plan and Budget.

There were 2 barriers identified as listed in Table 3. The following were discussed as barriers: A lack of training for coaches and community champions, and a lack of participation by wellness coalition members and community members.

DISCUSSION

Since 2015, SD rural wellness coalitions have been working to make healthful changes to their communities. Extension coaches played an integral role in guiding these wellness coalitions in implementing interventions to bring about positive changes in their communities. These Extension coaches underwent training to help establish and facilitate wellness coalitions within selected communities. The purpose of this study encompassed two areas of interest: 1) to assess self-perceived confidence in coaching abilities of Extension coaches and 2) identify barriers and facilitators to coaching success. The results showed that the Extension coaches self-perceived confidence in their coaching abilities improved from baseline to present day. Numerous facilitators to coalition success were identified, along with two barriers.

The results of this study determined how confidence of the coaches changed from the beginning of their coaching experience, to present day. The scorecards allowed the coaches to identify areas that they could improve upon in addition to seeing areas that they are doing well in. The results of the coaching confidence scorecard show that the self-assessed confidence of the coaches in their coaching abilities did increase significantly from start to present day. Key informant interviews provided the coaches the opportunity to discuss in more depth the subsections of the scorecard. Additionally, tools that aided in facilitating the coaches, barriers that limited their coaching ability, and experiences that aided in or inhibited coalition success, such as community involvement, or lack thereof.

SDSU Extension is a mode of outreach that brings educational programs and research-based information to South Dakota.⁹ The Extension coaches were employed as

Family and Community Health Field Associates and/or Specialists which had a minimum education requirement of a Bachelor's degree with preference for a Master's degree and demonstration of scholarly mastery in a discipline relevant to community development, education, nutrition, entrepreneurship, horticulture, or human services. The responsibilities for the role of a Family and Community Health Field Specialist included tasks related to community development and implementation efforts by developing partnerships, relationships, and frameworks. Differing educational backgrounds could have impacted the Extension coach's confidence levels and experiences.

The scorecard had the Extension coaches rank their level of confidence at pre and post in the areas of organizational structure and purpose, key implementation activities, and wellness coalition accomplishments. Within organizational structure, coaches ranked their confidence in a number of areas, including creating sub-committees, involving community champions in the leadership, and including paid staff or volunteers. Within organizational purpose, coaches ranked their confidence in developing a written strategic plan, developing a written mission statement, and documenting purpose and agenda. The results provided insight in to coaches self-perceived confidence in the organizational aspects of coaching. Within key implementation activities, a few of the areas that coaches ranked their confidence in included completing a community needs assessment, holding at least six wellness coalition meetings in a year, and seeking non-profit 501c3 status. Lastly, within wellness coalition accomplishments, coaches ranked their confidence in beginning work on and/or implementing at least one policy, system, or environmental change per year. There is limited research regarding how the self-perceived confidence of community coaches changes over-time. The results from this survey helped provide

insight into the different areas that the Extension coaches were tasked with and how their confidence improved from pre to post.

In the key informant interviews, most coaches discussed not having past experience in coaching wellness coalitions and did not feel prepared. While they were eager to help improve the communities, there were aspects of leading the coalition that they had never experienced. The results indicated that being a member of the community, gaining trust from community members, and training were key factors to boost their confidence. Given that many of the coaches were not members of the community(s), gaining trust from the community members was key. It is well-known that building trust is a practice that successful community coaches engage in.⁹ Getting to know community members and being present in the communities were found to be crucial in building that trust. Additionally, having the ability to understand that things do not always go as planned or happen as quickly as initially thought were also important characteristics for the Extension Coaches.

Perception of coach role indicated a shared belief of being facilitators, rather than leaders. Coaches felt that it was their role to not make all the decisions, but to rather guide their members. In community coalitions “over-coaching” is thought to inhibit progress, rather than drive it forward.¹⁰ Facilitation is the role that a coach takes on, while the community owns the process.¹⁰ Learning to take a step back by being another member of the coalition, rather than a leader, was an important aspect in aiding in sustainability of the coalition. While Coaches could be seen as leaders to the wellness coalitions, they aimed to be at the table with the members and strived to guide them in the right direction.

The wellness coalitions aimed to meet at least once a month, weather permitting, as communication was important to staying on track. This provided the opportunity to get members together to discuss progress on projects, updates, and any other information pertaining the wellness coalition. Extension Coaches learned how to be facilitators and utilized agendas to keep members on track. The meeting agendas were found to be helpful amongst all of the coaches as they kept the coalitions on track during meetings. While in-person communication was preferred, email was also utilized to stay in touch with members and to send agendas out. When agendas were sent out prior to meetings, coalition members were provided the opportunity to add to it their ideas and topics that they felt needed to be discussed.

Being a part of SDSU Extension and having access to Extension Resources was also discussed as being a facilitator. This included resources such as assistance with grant writing, trainings, meetings to discuss ideas or projects, and building coworker relationships with fellow Extension coaches. Given that the coalitions are in rural communities around the state of SD, it was discussed how it was isolating at times. Having the opportunity to communicate in meetings and learn from what other coaches were doing was highly beneficial. Building relationships with coworkers provided the coaches with support. Leadership within SDSU Extension was also discussed positively. At the time of the key informant interviews, there were a variety of policy, systems, and environment changes accomplished by the coalitions that were discussed positively. These included changes such as installing outdoor exercise equipment to increase physical activity levels and implementing programs such as “Stock Healthy, Shop

Healthy” to encourage healthy eating habits. These accomplishments were assisted by the use of Extension Resources and have played a role in the facilitation of coalition success.

Utilization of a community champion who was available and involved in the community was important to coaches. There is limited research regarding community champions, but in some cases they are called “catalysts.”¹¹ Community champions were members of the communities and had first-hand knowledge that some of the coaches lacked. Since they were already trusted in the community, they were instrumental in getting community members on board. These individuals can be described as having a passion for driving forward community change without having any formal authority.¹¹ Having a community champion that was readily available to help the coach was found to be invaluable given their insight of the community and commitment to improving the communities wellness. Since there were Coaches that lived in different locations than their coalition, the community champions were the individuals on the ground that were able to do many of the day-to-day tasks.

Establishment of partnerships with other community entities was also facilitated by community champions. Partnerships were discussed as being beneficial to coalition success, whether it be by providing a place to hold meetings or by partners being active members of the coalition. Some partners included the city, which shows how the city is invested in improving the health of their community members. The use of partnerships are known to aid in the impact of lasting improvements to community well-being and population-level health.¹² Additionally, being able to be mutually beneficial to one another was important in sustaining the relationships built.

The use of an action plan and budget was discussed positively by all Extension coaches. Utilizing these forms was beneficial as it created a timeline for the coalitions to follow. Planning out what the community wants to accomplish, who is going to do what, and dates at which to meet goals created a blueprint. Developing an action plan aided in accountability and in turning their ideas into reality. The budget was also a necessity to complete and required coalition members to work together in identifying which projects would be manageable. Knowing what funds were available and how those funds were going to be used allowed the coalition members to move forward with their plans.

Another area that was discussed as being beneficial to the wellness coalitions included the creation and use of vision and mission statements. While not every wellness coalition created a vision and mission statement, the coaches that did acknowledged the importance of them. There were some Extension coaches that discussed not making the time to do it but moving forward were planning on completing them. The coaches of wellness coalitions that did complete their vision and mission statements knew how beneficial it was in reminding the members and community of what they were working towards. Vision statements convey what the community is hoping to do for the future and work at uplifting members.¹³ Mission statements are more action oriented and explain the outcomes that the coalition is working towards.¹³ These statements are important in showing coalition members what is important. Additionally, they efficiently inform others about the coalition and what it is trying to accomplish. While it is easy to bypass taking the time to create these statements, they are thought to aid in creating ownership of the coalition by members.¹³ For the wellness coalitions that did complete their vision and

mission statements, this assisted in the motivation of coalition members and provided them with a concrete reminder of the importance of their work.

A barrier discussed by coaches included a lack of training for themselves and for their community champions. At the beginning of their run as Extension coaches, some discussed the feeling of uncertainty regarding what the role entailed. Additionally, there were coaches that did not have a background that prepared them for certain aspects, such as creating budgets. Having more onboarding training was discussed as something that would have been beneficial to the coaches. Not only was a lack of training for the Extension coaches determined to be a barrier, but also a lack of training for the community champions. Coaches discussed a need for the community champions to have training and clear expectations from the start. While each coach will grow and learn their own coaching techniques as they go, more training to assist in their confidence in their abilities at the start would be beneficial. Training for the community coaches to have a deeper understanding of the workings of a wellness coalition and their role would also aid in the facilitating long-term success in the coalitions.

Other than a lack of training, a lack of participation was also discussed as a barrier. It can be challenging to get steady participation in rural towns. Coaches discussed how when there was participation by coalition members they were able to accomplish more. However, coaches more often discussed how there was a struggle with active and steady participation. Many community members that were involved in the wellness coalitions were also involved in other community organizations. These individuals also often times had jobs, families, and other commitments, making it difficult to always attend meetings and actively participate. Coaches discussed the feeling of not wanting to

add additional responsibilities to their coalition members due to this. In many of the coalitions, this also led to a lack of formation of subcommittees and advisory boards. Going forward, increasing participation would facilitate coalition success.

This study explored the role of rural Extension coaches. Their perceived self-confidence in their coaching abilities increased overtime, which other community coaches can expect. The impact of this study includes community coaches having a tool to assess their level of confidence in their coaching ability and understanding barriers that may arise. Additionally, this study provides information on facilitators to wellness coalition success.

Limitations

Even though this study does provide valuable information regarding Extension coaching, there are limitations that need to be addressed. This study consisted of a small number of participants, which may not reflect all Extension coaches. Additionally, all but one of the coaches were current employees of SDSU Extension. This could have impacted what the coaches were willing to share. There is also the limitation of recall bias, which may have occurred when coaches were recalling information from the start of their role as an Extension coach.

Implications for Research and Practice

This study presented valuable information regarding barriers and facilitators to rural wellness coalition success. Future wellness coalitions should plan to offer training to coalition coaches at implementation. To facilitate in wellness coalition success, providing resources and a Community Champion to assist the coach can be beneficial. For coaches, utilizing an agenda, seeking outside funding, building partnerships, creating

mission and vision statements, utilizing an action plan and budget, and having strong communication aid in facilitation to wellness coalition success. This information may be used in similar settings in the future.

REFERENCES:

1. Barbara A. Israel, Edith A. Parker, Zachary Rowe, Alicia Salvatore, Meredith Minkler, Jesus Lopez, Arlene Butz, Adrian Mosley, Lucretia Coates, George Lambert, Paul A. Potito, Barbara Brenner, Maribel Rivera, Harry Romero, Betty Thompson, Gloria Coronado SH. *Community-Based Participatory Research: Lessons Learned from the Centers for Children's Environmental Health and Disease Prevention*. doi:10.1289/ehp.7675
2. Emery M, Hubbell K, Miles-Polka B. *A Field Guide to Community Coaching* A Field Guide to Community Coaching Developed by Mary Emery, PhD, Ken Hubbell and Becky Miles-Polka Published with Support from the W. K. Kellogg Foundation, the Annie E. Casey Foundation, Kellogg Action Lab at Fieldstone Alliance, and the Northwest Area Foundation.

<http://www.communitycoaching.com>. Accessed August 2, 2019.
3. Stluka S. Wellness Coalition Methods Manuscript.
4. Sharkey JR. Measuring Potential Access to Food Stores and Food-Service Places in Rural Areas in the U.S. *Am J Prev Med*. 2009;36(4):S151-S155.

doi:10.1016/J.AMEPRE.2009.01.004
5. Stluka S, Moore L, Eicher-Miller HA, et al. Voices for food: Methodologies for implementing a multi-state community-based intervention in rural, high poverty communities. *BMC Public Health*. 2018;18(1):1055. doi:10.1186/s12889-018-5957-9
6. Zoom. Zoom API - API Reference - Zoom Developer - Technical Documentation and Reference. <https://marketplace.zoom.us/docs/api-reference/zoom-api>.

7. TranscribeMe. TranscribeMe: The most accurate transcription starting at \$0.79 per minute. <https://www.transcribeme.com/>.
8. Stata: Software for Statistics and Data Science. <https://www.stata.com/>.
9. SDSU Extension . <https://extension.sdstate.edu/>. Accessed April 2, 2020.
10. Collaborating with Community-based Organizations Through Consultation and ... - Google Books.

https://books.google.com/books?id=dE2rAgAAQBAJ&pg=PA98&lpg=PA98&dq=community+coaches+facilitate+rather+than+lead&source=bl&ots=5Ns074bUs6&sig=ACfU3U3GWbILO098ofdmFZa-wqS2AWPklQ&hl=en&sa=X&ved=2ahUKEwjai9_IgY7nAhXXaM0KHbDhBF4Q6AEwCnoECAgQAQ#v=onepage&q=community coaches facilitate rather than lead&f=false. Accessed January 18, 2020.
11. Worthy SL, Downey L, Dyk PH, Monroe PA, Tyler-Mackey C, Welborn R. Turning the Tide on Poverty: Community champions as critical elements of success in economically distressed communities. *Community Dev.* 2016;47(3):341-357. doi:10.1080/15575330.2016.1167096
12. Towe VL, Leviton L, Chandra A, Sloan JC, Tait M, Orleans T. Cross-sector collaborations and partnerships: Essential ingredients to help shape health and well- being. *Health Aff.* 2016;35(11):1964-1969. doi:10.1377/hlthaff.2016.0604
13. Community Tool Box. Developing a Strategic Plan | Proclaiming Your Dream: Developing Vision and Mission Statements | Community Tool Box.

<https://ctb.ku.edu/en/table-of-contents/structure/strategic-planning/vision-mission-statements/main>. Accessed January 23, 2020.

Table 1. T-Test results from subsection pre and post confidence scores of coaching scorecards

Scorecard Sub-Sections^{***}	Range of Possible Scores⁺	Pre-Mean \pm Standard Dev.	Post-Mean \pm Standard Dev.	P-value^{**}
Organizational Structure	0 – 27 0 - 28	13.6 (8.6)	19.7 (9.3)	0.02*
Organizational Purpose	0 - 19	9.0 (5.7)	13.3 (6.2)	0.01*
Key Implementation Activities	0 – 53 0 - 55	27 (17.0)	39.6 (18.2)	0.01*
Accomplishments	0 - 13	5.6 (4.6)	9.1 (4.5)	0.03*
Total Score	0 – 112 0 - 115	55.1 (35.3)	81.7 (37.7)	0.00*

+Coaches were asked, “For all questions, please rate your level of confidence in coaching your coalition using the following scale: (1) Not confident at all, (2) Somewhat confident, (3) Moderately confident, (4) Very confident, (5) Completely confident.

*Indicates statistical significant ($P \leq 0.05$).

**Differences were determined with paired t-test analysis.

***Questions from each sub-section were totaled.

Table 2. key facilitators presented by Extension Wellness Coalition Coaches through key informant interviews (n=7)

Theme	Quote from Extension Coach
Perception of Coach Role	<p>“Now I'm realizing, "Okay, that's true, but with these communities, I have to understand how they work and that they really do see me as, not only a facilitator but part of the Coalition, too.”</p> <p>“It was probably more of an educational role. I was more of a teacher than a leader towards the end, which is good and how it should be.”</p> <p>“You need to get to know the community you're working in and come in with an open mind that you're there to learn from them, and it's their coalition, and you're just helping them get it started and providing some resources to get it going, but it's really for them.”</p>
Extension Resources	<p>“We have weekly team meetings. That's a chance for all of us to come together to talk about the project on a larger, statewide scale and then to talk to each other about our communities. And that's probably the most helpful thing for me.”</p> <p>“We do canning workshops, and that involves other Extension members. They come and lead the canning workshops. People really like those.”</p>
PSE	<p>“We did a walk audit a couple years ago. They've been trying to make their town more walkable, and that's an example of a project that's just really long-term.”</p> <p>“We did a ton of environmental. And that was outdoor playground. That was signage of the food pantry. That was for improving community gardens, expanding on the community gardens, getting irrigation. At the city park, we ended up building fruit trees-- not building, planting fruit trees.”</p>
Outside Funding	<p>“There is a huge benefit to have some outside funding because it motivates the coalition to know that we can really get things done.”</p> <p>“It allowed us to move forward with our projects. We were able to redo the track. They were able to put in the outdoor fitness equipment. It helped supply building materials for different things”</p>

Community Members	<p>“There's so much insight about the communities. I don't live there, and so a lot of the times, they know what their communities need. They bring a lot of passion and dedication to the table that's really motivating for me.”</p> <p>“everybody knows everybody, and they're not afraid to go and talk to somebody. Having that small, close-knit community made it easier to form those relationships. I think if they can see the benefit of-- if the project is benefiting the whole community, then they're always willing to help out if they have the time.”</p>
Partnerships	<p>“School and the one community is part of the well-connected community. And so that was a huge push for us to begin to add them or to involve youth. And then so we kind of partnered with FCCLA to be involved.”</p> <p>“I can't emphasize enough about partnerships that we have and how strong they are.”</p>
Mission Statement and Vision	<p>“But I think moving forward though, now that my coalition isn't a part of the grant, it would be beneficial of like, "Okay, what's your goal? What's your purpose? Why are we meeting?"</p> <p>“We kind of, especially early on, went through that with people of 'What is our mission? What are we here to do?' And there are people that like that kind of thrive in it”</p>
Community Champion Community Involvement	<p>“It was key, extremely important, especially since I didn't live in the community. It was key to find someone that was passionate about health and wellness and someone who was passionate and trusted by community members.”</p> <p>“They are pretty much the backbone. My community champions, I depend on them a lot. I delegate a lot to them to continuously reach out to individuals and to invite them to our next meetings.”</p>
Community Champion Availability	<p>“I utilized her a lot. Even just to bounce ideas off of and just using her expertise helped a lot too. And helping with grants and fundraising and just organizing things or-- if I had an idea or something, she would-- I don't know, she just directed us to the right people.”</p> <p>“To keep things running smoothly, I work very closely with them, from doing the minutes to making phone calls to city officials, tribal representatives, inviting them always to attend</p>

	our meetings.”
Agenda	<p>“It kept me on track as a coach more than anything, and it made sure that I was able to go back and touch on past action items to make sure that things were moving forward.”</p> <p>“If we got off topic, it was a great way to kind of bring the conversation back. "Okay, for the sake of time, let's start talking about this." And it kind of guided our coalition to those action steps and kind of kept us moving forward.”</p>
Communication	<p>“I think that communication is the big part of all of that. It's just what do you want, what do you expect, and what are you willing to do.”</p> <p>“Communication is probably the biggest thing. Just knowing what's available and taking time to understand the big picture and know what's available through what my coworkers do that might seem really far-off from what I do.”</p>
Action Plan and Budget	<p>“The action plans are really how we get things done because we have to submit them to be able to spend money.”</p> <p>“It's a tool that was extremely helpful for-- if you used it correctly, then it would have been a step-by-step process of what you're going to do. “</p> <p>“It gave us justification and meaning, it gave us a timeline, and then we met our goals. And then we had a place to kind of reference back of, "Okay, these funds are covering this. These funds are covering this.”</p>

Table 3. Key barriers presented by Extension Wellness Coalition Coaches through key informant interviews (n=7)

Theme	Quote from Extension Coach
Training	<p>“The training that we had, it was just one training, and it was good, but I think an onboarding, even series of trainings in your first six months, maybe, would have been really helpful”</p> <p>“Coming into this role, I honestly had no idea what I was doing.”</p> <p>“Going after different grants, that was new for me because I had never written a grant. I think having some sort of training in grant writing, I felt that helped a lot. Just having a little training or a resource of - and I know we have it, but maybe other people don't - the step-by-steps of going after different funding and what you need to do.”</p> <p>“It was unclear, I guess - initially, what the expectation really was.”</p> <p>“Vision and mission training should've happened in the beginning of the project. And I would've maybe liked a little more facilitation training, how to be a neutral facilitator and how to do strategic work plans. We do some subcommittees work, and it works fairly well. But I would like maybe some training on how to do that a little better, how to work with community champions and have them be a real effective member of the team, sustainability, how to help make these coalitions sustainable after the grant's over, and marketing communication.”</p>
Participation	<p>“If people are spread really thin, it's hard to have the mental capacity or time or effort to really drive things forward. I have had to figure out a good balance for that.”</p> <p>“It's hard to get other people to the meetings, but I do know that they're reading the meeting minutes because they will ask me about things that are in the minutes or respond to questions that are in the minutes.”</p> <p>“To involve community residents. Small town. Everybody's busy. They're involved in everything. It was a struggle to get people to come to different things”</p> <p>“My coalition wasn't the only group that they were involved in. And I know in small communities, typically, the same</p>

	<p>people do a lot of the events, and so they get burnt out, or they don't want to commit to yet another group.”</p> <p>“There's so few-- it's already a core group of people, and so it would be kind of just like another meeting for people that they don't have time for.”</p> <p>“I don't think that they would want to be put on different committees. Just make it sound more work.”</p>
--	---